REMARKS

In response to the Office Action of April 9, 2004, Applicant has carefully considered the rejections of the Examiner in the above-identified application. In light of this consideration, Applicant believes that the claims remain allowable. Applicant respectfully requests reconsideration of the rejection of the claims now pending in the application.

In the Office Action of May 20, 2003, Claims 1-16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Dermer et al., U.S. Patent No. 5,313,570, (hereinafter Dermer) in view of Fukuda et al. U.S. Patent No. 5,867,593 (hereinafter Fukuda).

In the Office Action of November 10, 2003, Claims 1-16 stood rejected under 35 U.S.C. §103(a) as being unpatentable over Dermer in view of Fukuda. In response, the subsequent Request for Continued Examination under §1.114 with a Preliminary Amendment, claims 1 and 9 were amended and claims 7 and 15 canceled.

In this Office Action of May 20, 2003, Claims 1-6, 8-14, and 16, are rejected under 35 U.S.C. §103(a) as being unpatentable over Dermer et al., U.S. Patent No. 5,313,570, (hereinafter Dermer) in view of Fukuda et al. U.S. Patent No. 5,867,593 (hereinafter Fukuda).

Dermer teaches a method for determining the boundaries between regions of color making up polychromatic document pages or images, in order to compensate for misregistration of printing plates in printing, and thereby to prevent light leaks and other errors at the boundaries so determined. A map of the boundaries is generated, to which trapping operations are applied to form a structured graphic object that is included as the last object imaged in the data

representing the original image. The geometrical description of the boundary map determined according to the method of the invention is independent of specific trapping decisions applicable to the associated image.

Fukuda teaches an image region dividing apparatus that includes a same-kind image region extraction unit for dividing a digital image into blocks by extracting boundaries, from the background, of regions where same kinds of images are present, from the digital image; horizontal and vertical difference detectors for obtaining the difference values of the luminance levels of adjacent pixels in the horizontal and vertical directions from a discrimination target block; a feature pattern discrimination unit for performing recognition processing on the basis of a correlation between the shapes of a calculated corrected luminance level histogram ys and a calculated gradient vector direction histogram θ_r and an image kind determination unit for determining image kinds. The apparatus performs image kind discrimination of each discrimination target block.

The Examiner acknowledges that Dermer does not disclose modeling a third image wherein the third image contains at least said first and second images and represents a depiction of said first and second images without an overlap between said first and second images. Fukuda is proffered as supplying what Dermer lacks. However, the teaching supplied by Fukuda provides for an output of only *three* separate image regions A' and B', as well as region H, as discussed with regards to Figures 24A to 24C. (Please see in particular column 22, lines 48-50). In other words, it ***separates*** the regions it finds. There is no suggestion or teaching in Fukuda to merge regions to provide a new (third) image consisting of (in effect for Fukuda), the image regions A' and B' in combination with region H, as taught and claimed by the Applicants. That is because Fukuda is only interested in decreasing the number of regions for image load discrimination (see column 22 lines 51-54). That interest is in contrast to

Applicant's interest in delineating amongst a plethora of documents, snapshots, etc. all laid upon a smart platen for simultaneous input with a single scan. Thus, Fukuda does not have any reason to teach or suggest, modeling a third image wherein the third image contains at least said first and second images and represents a depiction of said first and second images without an overlap between said first and second images. Indeed, nowhere within Fukuda Is there to be found any such teaching or suggestion. Thereby, Fukuda fails to provide what Dermer lacks. Thus, there is no motivation for anyone skilled in the art to combine Dermer and Fukuda. Thus a showing for establishing a *prima facie* case of obviousness has not been made. Claims 1 and 9 are therefore allowable as they stand. Allowance of claims 1 and 9 is respectfully requested.

Dermer does not teach link lists. Dermer teaches the compensation for mis-registration of printing plates by determining the boundaries between regions of color. As such Dermer operates upon "structured graphic image data" (see column 4, lines 45-47) one example of which is "PostScript" ® (see column 4, line 60). A structured graphic image by definition provides regions to be filled (see column 4, line 54) or a graphic object description which refers to a single closed polygon (see column 4, lines 67-68). The graphic object description for each such polygon is made up of the *coordinates of all the vertices* which define the closed polygon (see column 5, lines 5-8). A collection of all such graphic object descriptions as an entire set makes up a display list. When a display list is "clipped" (see column 5, lines 34-39) the set of boundaries collected together is referred to as a "boundary map". The Figure 12 referenced in the Office Action is a depiction of such a "boundary map" and as such depicts *coordinates of all the vertices* which define that closed polygon. It is these *coordinates of all the vertices* and the lines they define which are listed in tables 1-3 also referenced in the Office Action. As is well understood by those skilled in the art, none of the above from Dermer are analogous to a link list containing the edge pixel locations

"found" via image processing in bitmapped/ raster scan data as explained in cross-referenced & incorporated Applications: No. 08/786,538, No. 08/338,856, and No. 08/785,109.

A linked list is a list of edge points (i.e. pixel points), determined via image processing from raster scan data that are approximately collinear, wherein an edge occurs in an image when two neighboring pixels have sufficiently different pixel values according to an appropriate criterion for the occurrence of an edge between them. (See page 7, lines 15-17 and page 8, lines 13-17). As will be apparent to one skilled in the art, these edge pixels are such as is found in bit mapped raster scan image data. This is in stark contrast to the structured graphic image data of Dermer and the polygon edges as defined by coordinate vertices described therein, *which are not the result from raster scanner input data.* A polygon edge needs but two coordinate vertices to describe it. The determination of an edge in bitmapped data will require a great many edge points to define it. Dermer teaches structured graphic image data and polygon edges as defined by coordinate vertices which are contained as listed within the structured graphic data format. The Applicant teaches bitmapped data as would be available from a scanner and the collection of pixel edge points to define an edge. Thus, Dermer fails to teach the Applicant's utilization of linked lists as first approximations of where these boundaries are when confused by a picture/document background similar to a platen background as will be evident to anyone skilled in the art. Thus a showing for establishing a *prima facie* case of obviousness has not been made. Claims 1 and 9 are therefore allowable. Allowance of claims 1 and 9 is respectfully requested.

The Examiner appears to have considered various portions of the references cited, in each instance viewing the cited portion in isolation from the context of the entire reference, and combined these isolated portions to arrive

at the present invention with the benefit of hindsight. Using hindsight or applying the benefit of the teachings of the present application when determining obviousness, however, is impermissible; the references applied must be reviewed without hindsight, must be reviewed as a whole, and must suggest the desirability of combining the references. Lindemann Maschinenfabrik v. American Hoist & Derrick Co., 221 U.S.P.Q. 481 (Fed. Cir. 1984).

When determining patentability under §103, the Examiner must consider the invention as a whole, and cannot view each element of the claim separately with respect to the prior art. See, e.g., Jones v. Hardy, __ F.2d __, 220 U.S.P.Q. 1021 (BNA) (Fed. Cir. 1984). None of the cited references suggests or teaches the desirability of combining the elements of the present invention as claimed. Obviousness cannot be established by combining references to arrive at the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. In re Geiger, 2 U.S.P.Q. 2d 1276 (Fed. Cir. 1987); Carella v. Starlight Archery and Pro Line Co., 804 F.2d 135, 231 U.S.P.Q. 644 (Fed. Cir. 1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 221 U.S.P.Q. (BNA) 929 (Fed. Cir. 1984).

The Examiner has rejected claims 2-6, 8, 10-14, and 16 as being unpatentable over combined teachings of Dermer, and Fukuda. As claims 2-6, 8, 10-14, and 16, depend from claims deemed allowable, they should be allowable as well. Allowance of claims 2-6, 8, 10-14, and 16 are respectfully requested.

No additional fee is believed to be required for this amendment; however, the undersigned Xerox Corporation attorney authorizes the charging of any necessary fees, other than the issue fee, to Xerox Corporation Deposit Account No. 24-0025.

It is respectfully submitted that the present set of claims are patentably distinct over the cited references. In the event the Examiner considers personal contact advantageous to the disposition of this case, he is hereby requested to call the undersigned attorney at (585) 423-6918, Rochester, NY.

Respectfully submitted,

Christopher D. Wait
Attorney for Applicant(s)
Registration No. 43,230
Telephone (585) 423-6918

July 27, 2004
CDW/fsl
Xerox Corporation
Xerox Square 20A
Rochester, New York 14644